

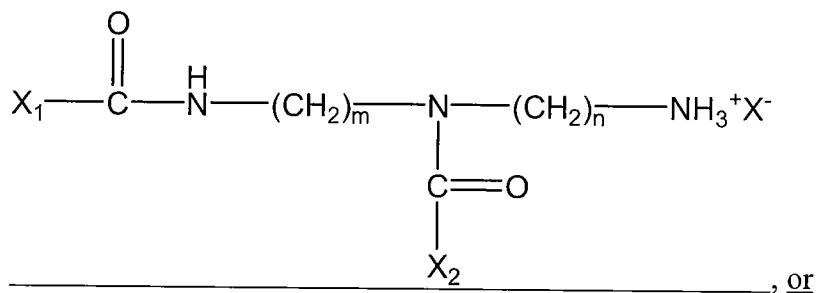
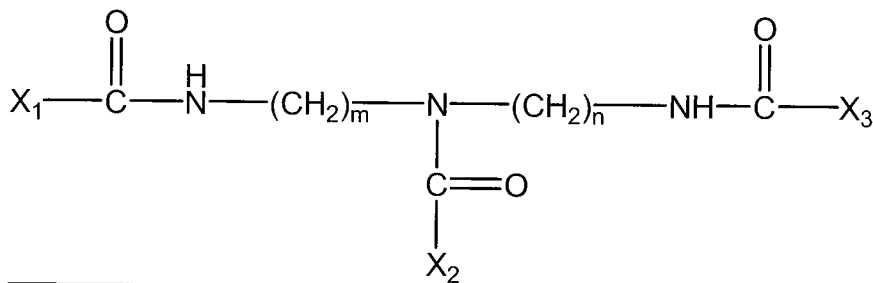
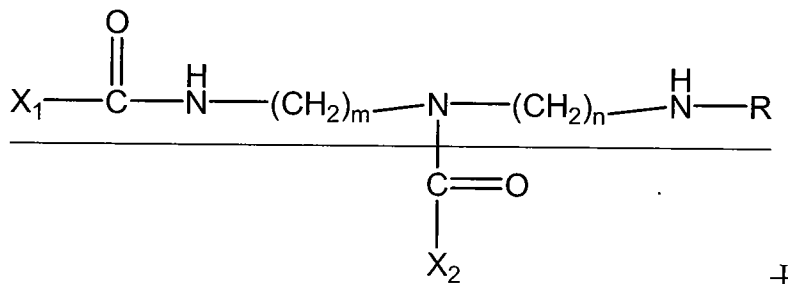
Amendments to the Claims:

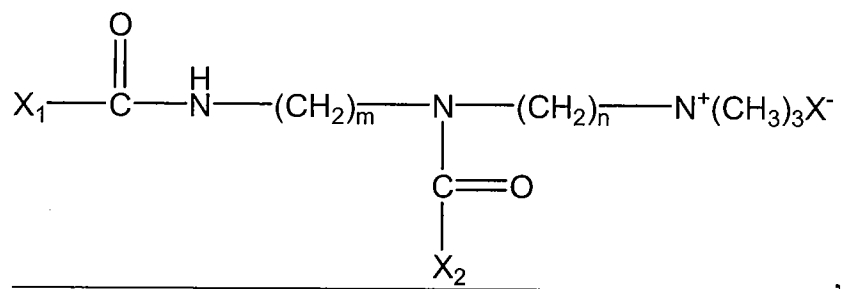
This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-27. (canceled)

28. (currently amended) A composition for delivering an agent to cells, the composition comprising the agent and a delivery enhancing compound of formula: ~~Formula I~~:





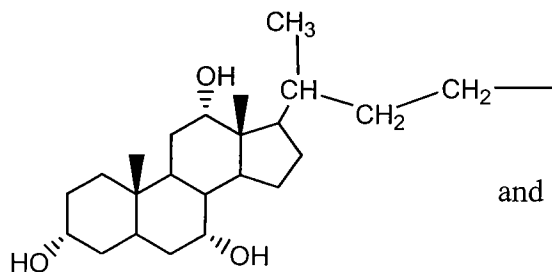
wherein:

X⁻ is a counterion;

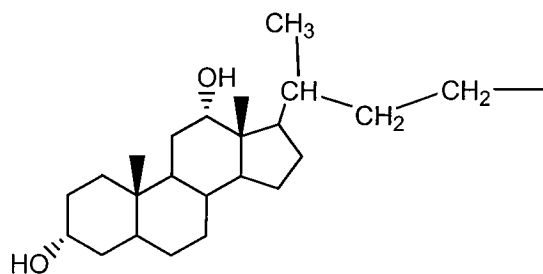
m and n are the same or different and each is an integer from 2-8; ~~R forms a~~

~~eationic group with the nitrogen to which it is bound, or~~ $\begin{array}{c} \text{O} \\ \parallel \\ \text{---C---X}_3\text{---} \end{array}$

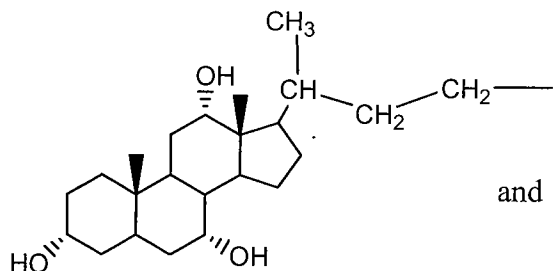
X₁ is selected from the group consisting of



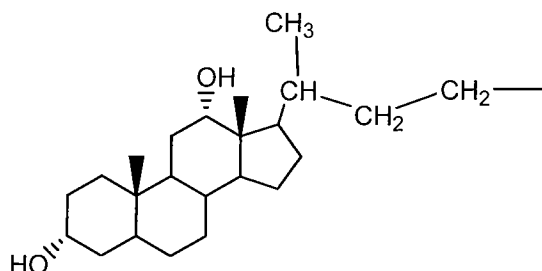
and



X₂, and X₃ are each independently selected from the group consisting of a saccharide group,

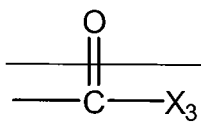


and



wherein at least one of X₂ and X₃ is a saccharide group when X₃ is present R

is



, and wherein said agent is a member selected from the group consisting of a therapeutic protein, a therapeutic gene, a vector and an antisense nucleic acid.

29. (previously presented) The composition according to claim 28, wherein the saccharide group has between one to eight monosaccharide groups.

30. (original) The composition according to claim 29, wherein the saccharide group is selected from the group consisting of pentose monosaccharide groups, hexose monosaccharide groups, pentose-pentose disaccharide groups, hexose-hexose disaccharide groups, pentose-hexose disaccharide groups, and hexose-pentose disaccharide groups.

31. (original) The composition according to claim 28, wherein the saccharide group is a trisaccharide.

32. (original) The composition according to claim 28, wherein the concentration of the delivery enhancing compound is about 0.002 to about 2 mg/ml.

33. (original) The composition according to claim 32, wherein the concentration of the delivery enhancing compound is about 0.2 to 2 mg/ml.

34. (original) The composition according to claim 28, wherein the agent modulates a biological process in a cell when the agent is present in the cell.

35. (original) The composition according to claim 34, wherein the biological process is selected from the group consisting of cell growth, differentiation, proliferation, a metabolic or biosynthetic pathway, gene expression, a disease-associated process, and an immune response.

36. (original) The composition according to claim 28, wherein the agent comprises a polynucleotide.

37. (previously presented) The composition according to claim 36, wherein the polynucleotide is selected from the group consisting of a triplex-forming nucleic acid, and a nucleic acid that comprises a gene which encodes a polypeptide.

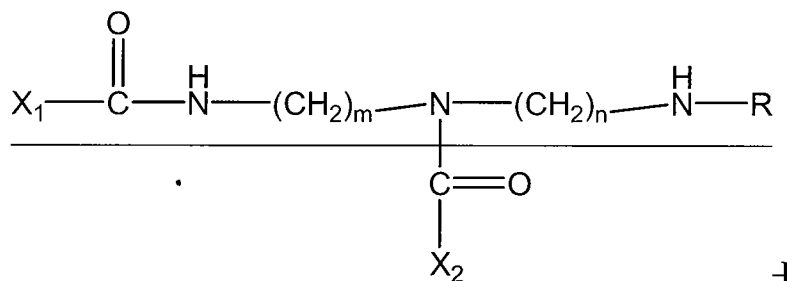
38. (original) The composition according to claim 37, wherein the gene is a tumor suppressor gene.

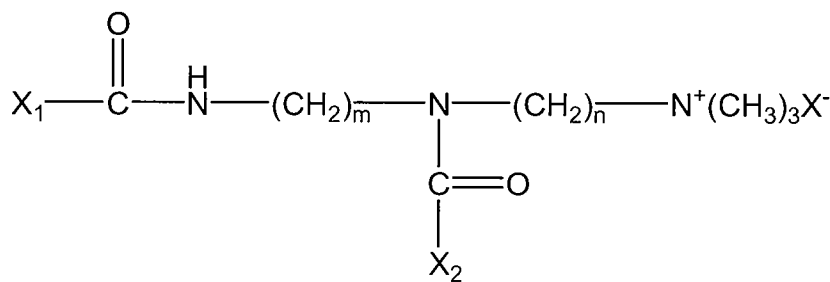
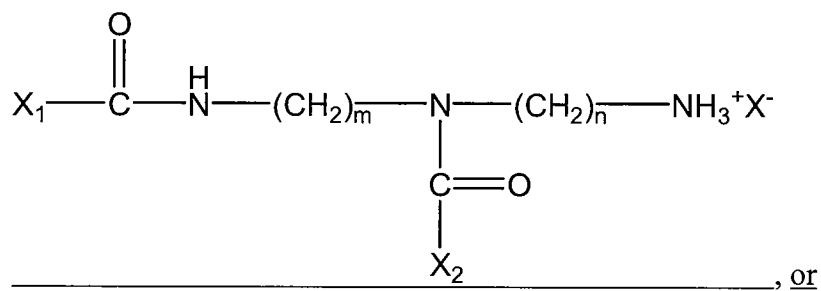
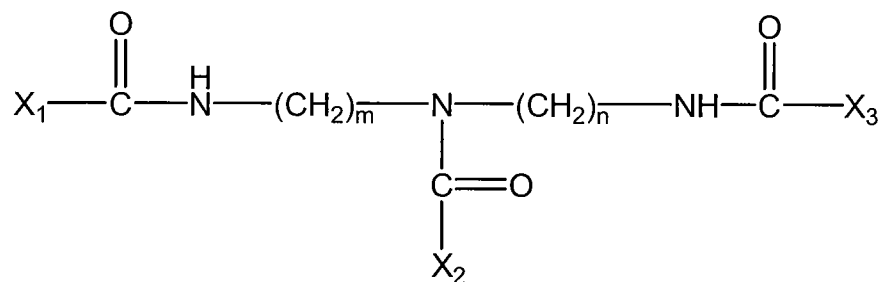
39. (original) The composition according to claim 37, wherein the tumor suppressor gene is selected from the group consisting of a retinoblastoma gene and a p53 gene.

40. (original) The composition according to claim 28, wherein the composition further comprises a polymeric matrix.

41. (original) The composition according to claim 28, wherein the composition further comprises a mucoadhesive.

42. (currently amended) A delivery enhancing compound of formula: ~~Formula~~
I:





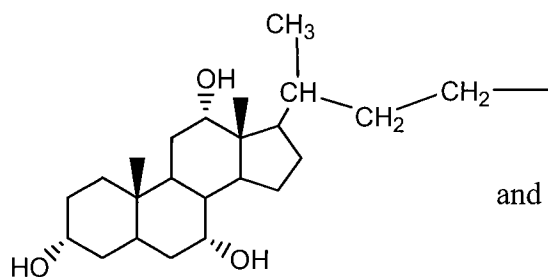
wherein:

X⁻ is a counterion;

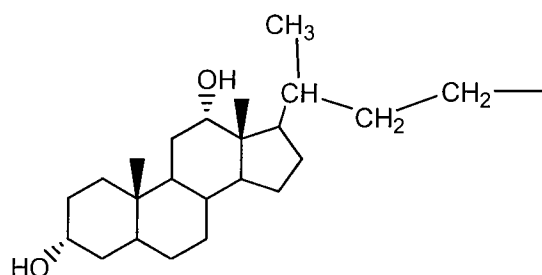
m and n are the same or different and each is an integer from 2-8; ~~R forms a~~

~~cationic group with the nitrogen to which it is bound, or~~ $\begin{array}{c} \text{O} \\ \parallel \\ \text{---C---X}_3 \end{array}$,

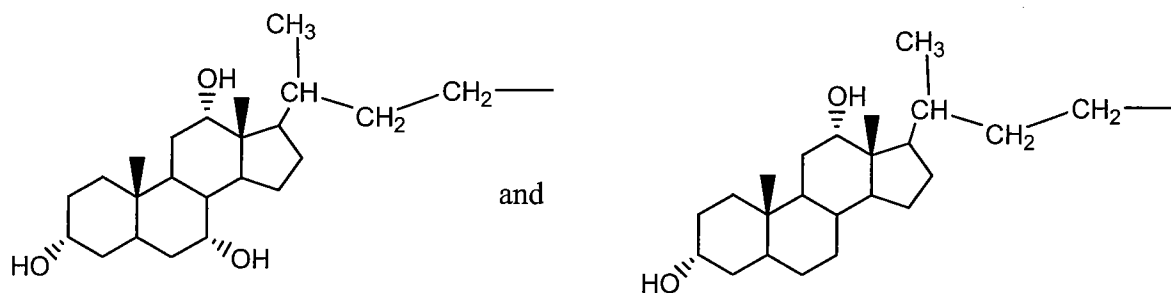
X₁ is selected from the group consisting of



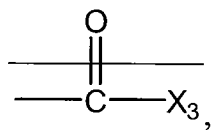
and



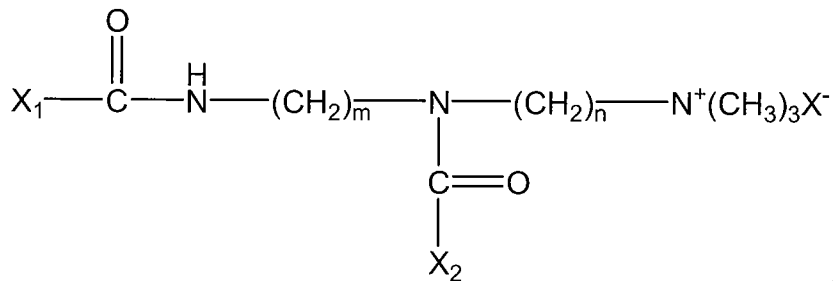
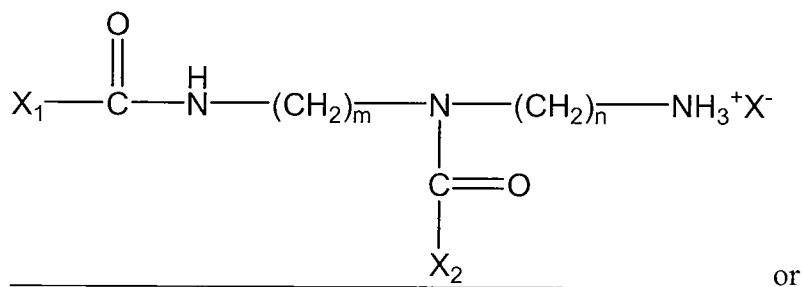
X₂, and X₃ are each independently selected from the group consisting of a saccharide group,



wherein at least one of X₂ and X₃ is a saccharide group when X₃ is present R is



43. (currently amended) The compound of claim 42, wherein the compound is of the formula:



wherein R forms a cationic group selected from the group consisting of NMe_3^+ and NH_3^+ ;

44 (previously presented). The compound of claim 42, wherein the saccharide group has between one to eight monosaccharide groups.

45. (original) The compound of claim 44, wherein the saccharide group is selected from the group consisting of pentose monosaccharide groups, hexose monosaccharide groups, pentose-pentose disaccharide groups, hexose-hexose disaccharide groups, pentose-hexose disaccharide groups, and hexose-pentose disaccharide groups.

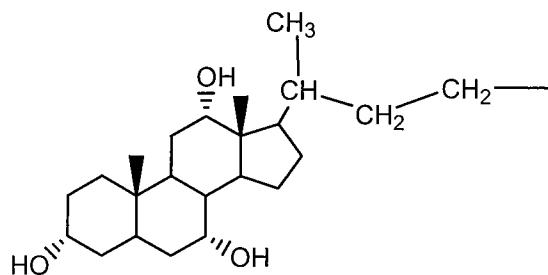
46. (original) The compound of claim 42, wherein the saccharide group comprises between three and about eight monosaccharide residues.

47. (original) The compound of claim 46, wherein the saccharide group is a trisaccharide.

48. (currently amended). The compound of claim 42, wherein at least one of X_2 and X_3 is a disaccharide group.

49. (original) The compound of claim 42, wherein m and n are each independently 2 or 3.

50. (currently amended) The compound of claim 42, wherein both X_1 and X_2 are both



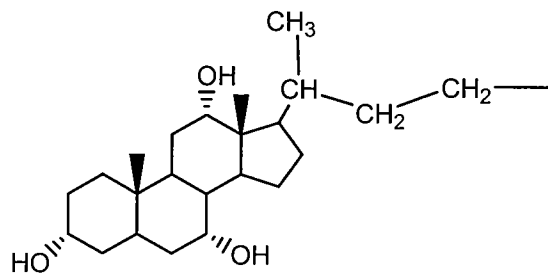
and X_3 is ~~[[a]]~~ the saccharide group.

51. (original) The compound of claim 42, wherein the saccharide group is a hexose-hexose disaccharide group.

52. (canceled).

53. (previously presented) The compound of claim 42, wherein m and n are each 3,

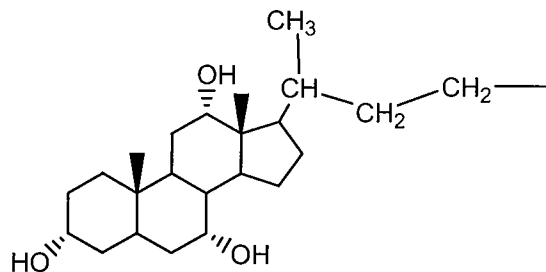
X_1 and X_3 are both



and X_2 is a hexose monosaccharide group.

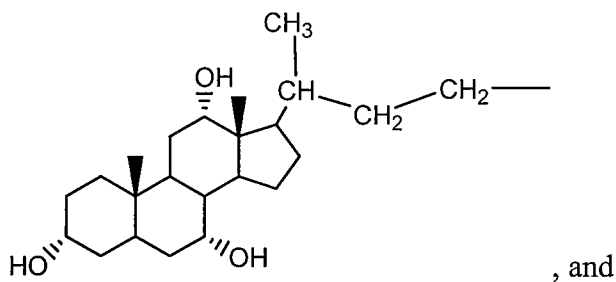
54. (previously presented) The compound of claim 42, wherein m and n are each 3,

X_1 and X_2 are both



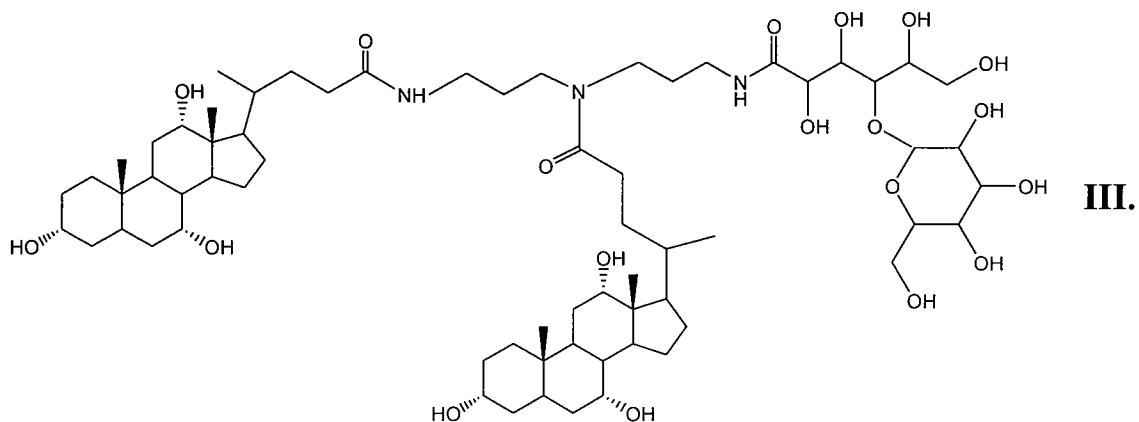
and X_3 is a hexose-hexose disaccharide group.

55. (previously presented) The compound of claim 42, wherein m and n are each 3, X_1 and X_3 are both

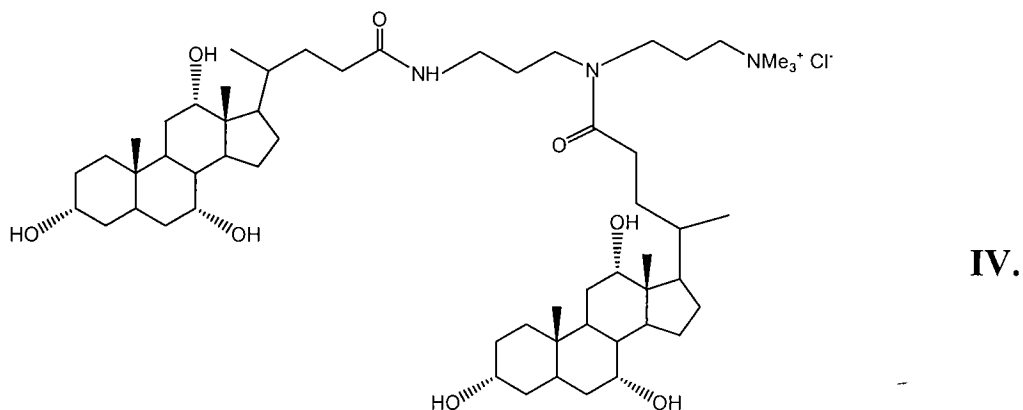


X₂ is a hexose-hexose disaccharide group.

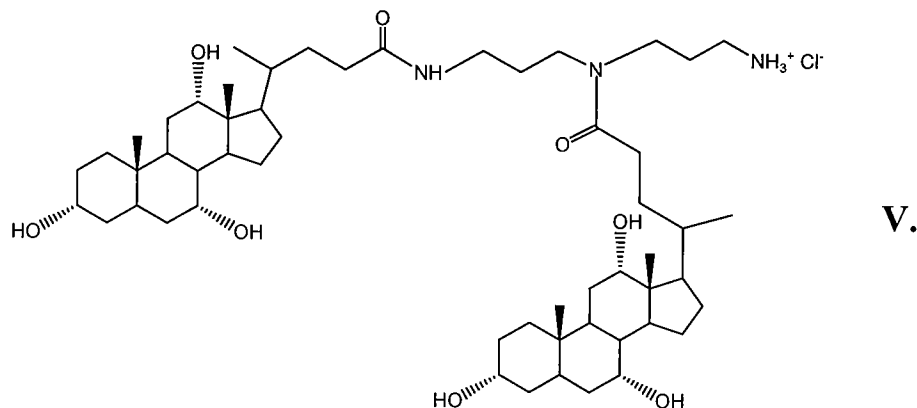
56. (previously presented) The composition according to claim 28, wherein the compound has a Formula III:



57. (previously presented) The composition according to claim 28, wherein the compound has a Formula IV:



58. (previously presented) The composition according to claim 28, wherein the compound has a Formula V:



59-81. (canceled)

82. (previously presented) The composition according to claim 28, wherein the agent is a gene encoding an interferon.

83. (previously presented) The composition according to claim 82, wherein the interferon is a member of the group selected from α -interferon, β -interferon, δ -interferon, and γ interferon.

84. (previously presented) The composition according to claim 83, wherein the interferon is α -interferon.

85. (previously presented) The composition according to claim 28, wherein the gene is incorporated into a vector.

86. (previously presented) The composition according to claim 28, wherein the vector is a recombinant viral vector.

87. (previously presented) The composition according to claim 86, wherein the recombinant viral vector is selected from the group consisting of a herpes viral vector, retroviral vector, vaccinia viral vector and an adenoviral vector.

88. (previously presented) The composition according to claim 87, wherein the recombinant viral vector is an adenoviral vector.

89. (previously presented) The composition according to claim 88, wherein the adenoviral vector has a deletion of the protein IX gene.

90. (previously presented) The composition according to claim 32, wherein the concentration of the delivery enhancing compound is about 0.1 to 1 mg/ml.

91. (previously presented) The composition according to claim 28, wherein the therapeutic gene is selected from the group consisting of a tumor suppressor gene, a suicide gene, a triplex forming nucleic acid molecule, a gene encoding a cytokine, a gene encoding an interleukin, and a gene encoding a colony stimulating factor.

92. (previously presented) The composition according to claim 28, wherein the agent is an antisense nucleic acid molecule.

93. (previously presented) The composition according to claim 28, wherein the agent is a therapeutic protein.

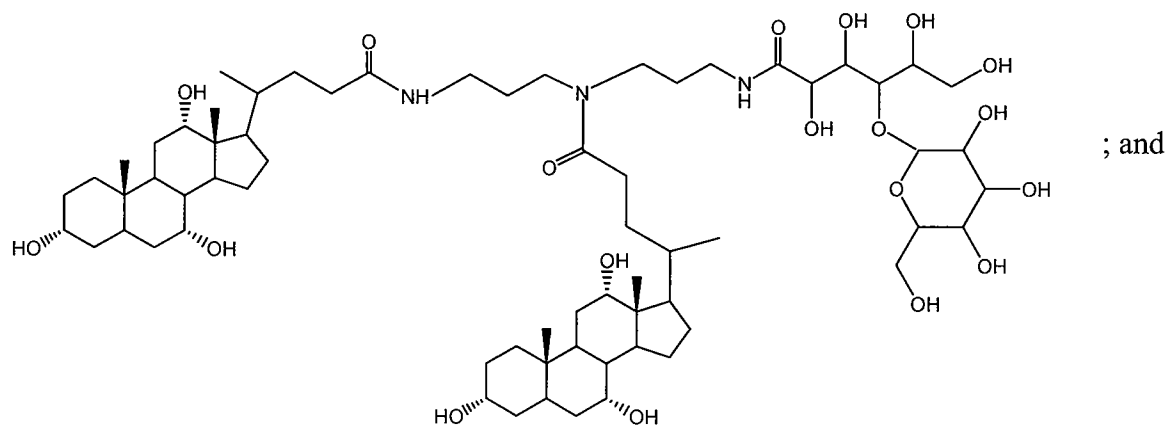
94. (previously presented) The composition according to claim 35, wherein the proliferation is a neoplastic disorder.

95. (previously presented) The composition according to claim 94, wherein the neoplastic disorder is cancer.

96. (previously presented) The composition according to claim 91, wherein the gene encoding a cytokine is selected from the group consisting of interferons α , β , δ , and γ .

97. (previously presented) The composition according to claim 91, wherein the gene encoding an interleukin is selected from the group consisting of IL-1, IL-2, IL-4, IL-6, IL-7 and IL-10.

98. (previously presented) A composition, the composition comprising:
a compound having the formula



III

an agent selected from the group consisting of a therapeutic protein, a therapeutic gene, a vector and an antisense nucleic acid.

99. (previously presented) The composition according to claim 98, wherein the therapeutic gene encodes interferon.

100. (previously presented) The composition according to claim 99, wherein the interferon is α -interferon.

101. (previously presented) The composition according to claim 99, wherein the interferon is β -interferon.

102. (previously presented) The composition according to claim 99, wherein the interferon is δ -interferon.

103. (previously presented) The composition according to claim 99, wherein the interferon is γ -interferon.

104. (previously presented) The composition according to claim 99, wherein the gene encoding interferon is incorporated in a viral vector.

105. (previously presented) The composition according to claim 104, wherein the viral vector is an adenoviral vector.

106. (previously presented) The composition according to claim 105, wherein the adenoviral vector comprises a CMV promoter.

107. (previously presented) The composition according to claim 105, wherein the adenoviral vector has a deletion of the protein IX gene.

108. (previously presented) The composition according to claim 105, wherein the composition comprises about 1.0×10^8 particles/ml to 1.0×10^{12} particles/ml of the adenoviral vector.

109. (previously presented) The composition according to claim 105, wherein the composition comprises about 1.0×10^9 particles/ml to 1.0×10^{11} particles/ml of the adenoviral vector.

110. (previously presented) The composition according to claim 105, wherein the composition comprises about 1.0×10^8 particles/ml to 5.0×10^{11} particles/ml of the adenoviral vector.

111. (previously presented) The composition according to claim 105, wherein the composition comprises about 5.0×10^{11} particles/ml of the adenoviral vector.

112. (previously presented) The composition according to claim 98, wherein the composition further comprises a buffer.

113. (previously presented) The composition according to claim 98, wherein said compound of formula III and the gene encoding interferon are mixed just prior to administration to the patient.

114. (previously presented) The composition according to claim 98, wherein the concentration of the compound is about 0.002 to about 2 mg/ml.

115. (previously presented) The composition according to claim 114, wherein the concentration of the compound is about 0.2 to 2 mg/ml.

116. (previously presented) The composition according to claim 114, wherein the concentration of the compound is about 0.1 to 1 mg/ml.

117. (previously presented) The composition according to claim 98, wherein the therapeutic gene is selected from the group consisting of a tumor suppressor gene, a suicide gene, a triplex forming nucleic acid molecule, a gene encoding a cytokine, a genes encoding an interleukin, and a gene encoding a colony stimulating factor.

118. (previously presented) The composition according to claim 117, wherein the gene encoding an interleukin is selected from the group consisting of IL-1, IL-2, IL-4, IL-6, IL-7 and IL-10.

119. (previously presented) The composition according to claim 98, wherein the agent is an antisense nucleic acid.

Appl. No. 10/055,863
Amdt. dated July 23, 2007
Reply to Office Action of April 23, 2007

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120. (previously presented) The composition according to claim 98, wherein the agent is a therapeutic protein.